REMARKS

Claims 1-20 and 35-37 are currently pending in this application, as amended. Claims 21-34 were previously canceled for being directed to a non-elected invention. Claims 4-5 have been rewritten in independent form. Claims 1 and 12 have been amended to more particularly point out and distinctly claim the invention. Support for the claim amendments can be found in, among other places, the originally submitted Specification at paragraphs [0044], [0046]-[0050]; paragraphs [0054]-[0056]; and Figs. 1, 3, 7 and 9. Accordingly, no new matter has been added.

Claim Rejections Under 35 U.S.C. § 103(a)

Rejection of Claim 1

Claim 1 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,633,859 ("Reneau") in view of U.S. Patent No. 1,224,180 ("Lake"), U.S. Patent No. 3,006,339 ("Smith") and U.S. Patent No. 4,481,938 ("Lindley").

Withdrawal of the rejection of claim 1, as amended, is respectfully requested in view of the foregoing amendments and for at least the following reasons.

Claim 1

Claim 1, as amended, recites, *inter alia*:

> a sampling system coupling the oxygen analyzer to the pressure vessel configured to conduct the gas from an interior of the pressure vessel to the oxygen analyzer from a plurality of separate locations in the pressure vessel....
>
> [underline emphasis added]

Reneau, Lake, Smith and Lindley, taken alone or in combination, fail to disclose or suggest a hyperbaric oxygen therapy system having a sampling system that couples the oxygen analyzer to the pressure vessel for conducting the gas from an interior of the pressure

vessel to the oxygen analyzer from a plurality of separate locations in the pressure vessel, as called for in amended claim 1.

Reneau discloses a hyperbaric chamber filled with an inert gas having a separate breathing line to the patient and that includes an analyzer "in fluid communication with [the] hyperbaric chamber." Reneau does not suggest sampling for oxygen at more than one location. Lake merely provides for temperature control of compressed, dried air delivered to a compression chamber without oxygen monitoring. Lindley discloses that the head compartment is connected to a percentage oxygen concentration gauge to show a percentage of oxygen inspired by a patient, but also does not suggest sampling for oxygen at more than one location.

The modified Reneau device discloses a chamber having the oxygen concentration of its internal inert gas atmosphere controlled by an electric oxygen monitor/controller while a separate breathing line delivers breathable oxygen to the patient. None of the references disclose or suggest sampling the gas for the oxygen analyzer from a plurality of separate locations in the pressure vessel.

To establish *prima facie* obviousness of a claimed invention, all of the claimed limitations must be taught or suggested by the prior art. MPEP § 2143.03. Thus, all of the claimed elements and features of claim 1 are not disclosed by the modified Reneau device.

Applicants therefore respectfully submit that claim 1 is not obvious under 35 U.S.C. § 103(a) in view of the combination of Reneau, Lake, Smith and Lindley. Accordingly, Applicants respectfully request that the rejection of independent claim 1 under 35 U.S.C. § 103(a) be withdrawn.

Rejection of Claims 6-9

Claims 6-9 have been rejected as being unpatentable over Reneau in view of Lake and Smith and further in view of U.S. Patent No. 5,398,678 ("Gamow").

Withdrawal of the rejection of claims 6-9, as amended, is respectfully requested in view of the foregoing amendments and for at least the following reasons.

Claims 6-9

Claims 6-9 are dependent upon independent claim 1.

For reasons similar to claim 1, Reneau, Lake, Smith and Gamow, taken alone or in combination, fail to disclose or suggest a hyperbaric oxygen therapy system having a sampling system that couples the oxygen analyzer to the pressure vessel for conducting the gas from an interior of the pressure vessel to the oxygen analyzer from a plurality of separate locations in the pressure vessel.

Reneau discloses a hyperbaric chamber filled with an inert gas having a separate breathing line to the patient and that includes an analyzer "in fluid communication with [the] hyperbaric chamber." Reneau does not suggest sampling for oxygen at more than one location. Lake merely provides for temperature control of compressed, dried air delivered to a compression chamber without oxygen monitoring. Gamow is merely an inflatable tent or bubble with no oxygen monitoring.

Applicants therefore respectfully submit that claims 6-9 are not obvious under 35 U.S.C. § 103(a) in view of the combination of Reneau, Lake, Smith and Gamow. Accordingly, Applicants respectfully request that the rejection of claims 6-9 under 35 U.S.C. § 103(a) be withdrawn.

Rejection of Claims 12-15

Claims 12-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gamow in view of Lake, Smith and the Marine Air Systems Operations Manual for Passport II (hereinafter, "the Passport Manual").

Withdrawal of the rejections of claims 12-15 is respectfully requested in view of the foregoing amendments and for at least the following reasons.

Claim 12

Claim 12, as amended, recites, *inter alia*:

> a digital temperature controller having an adjustable set point which receives the electrical output signal of the temperature sensor and provides a control signal to the heat pump for adjusting the temperature of the exchange fluid to thereby maintain the temperature of the gas within a predetermined range of the set point, the digital temperature controller being configured to display a representation of the temperature sensed by the temperature sensor and the adjustable set point, the digital temperature controller having a control algorithm that controls the control signal, the control algorithm being based on at least one of time proportioning control, error proportioning control, proportional control, integral control and derivative control, the digital temperature controller causing the heat pump to heat the gas when the temperature sensed by the temperature sensor is below the adjustable set point by a predetermined amount and causing the heat pump to cool the gas when the temperature sensed by the temperature sensor is above the adjustable set point by the predetermined amount.
>
> [underline emphasis added]

Gamow, Lake, Smith and the Passport Manual, taken alone or in combination, fail to disclose or suggest a hyperbaric oxygen therapy system having a digital temperature controller having a control algorithm that controls a control signal, wherein the digital temperature controller causes the heat pump to heat the gas when the temperature sensed by the temperature sensor is below the adjustable set point by a predetermined amount and causes the heat pump to cool the gas when the temperature sensed by the temperature sensor is above the adjustable set point by the predetermined amount.

Gamow discloses a portable hyperbaric enclosure with a means for maintaining a gas pressure of 10 PSI including a blower and a gas (oxygen) tank. But, Gamow lacks any means of environmental temperature control. Lake discloses a thermostat that controls a solenoid which directs or diverts a flow of air through a heat exchanger to directly control the temperature of the air in a chamber. The temperature control chamber of Lake is either configured for heating or cooling the tank, depending on the application – but *not* both. Lake, page 2, second column, lines 125-130. The tank of Lake is *not* a heat pump. Smith also mentions, but does not describe, that the air-conditioning is controlled by a conventional thermostat 75. Col. 3, lines 35-41. Smith merely shows a circle with a line in Fig. 2 labeled as element 75. A thermostat electromechanically responds to temperature by opening and closing

bi-metallic contacts. A thermostat is not a digital controller having a control algorithm such as time proportioning, error proportioning or P-I-D control in order to cause a heat pump to heat or cool, as necessary.

The Examiner has relied upon the Applicants' disclosure at paragraphs [0055]-[0056] in order to modify the combined Gamow, Lake and Smith devices by the Passport Manual. The Applicants specifically disclosed that the temperature controller is preferably a Marine Air Systems Passport II. In particular, the Examiner has used impermissible hindsight to construct the Applicants' invention.

Even if, *arguendo*, the environmental controller of Lake were modified to include the controller described in the Passport Manual, the modified device would still not yield the Applicants' device claimed in claim 12, as amended. The digital Passport II controller would merely be linked to a bypass valve pair 42, 43' so that when the temperature in the chamber exceeds a certain degree, the air flow through the temperature regulating apparatus is cut off and uncontrolled air from the purifier and drier is sent directly into the chamber. See e.g., Lake, page 8, column 1, lines 30-38. This arrangement relies on environmental conditions outside the temperature regulating apparatus to cool the chamber by dissipation. If, as asserted by the Examiner, one were to merely put a heat pump in place of the temperature regulating apparatus of Lake, the heat pump would be by-passed by valves 42, 43' after exceeding a predetermined temperature and the heat pump would not cool the gas, but rather, ambient conditions would cool the gas. Otherwise, the temperature system of Lake would require even further modification, not suggested in the references, in addition to combining and modifying the collection of references as already suggested by the Examiner.

In contradistinction, the embodiment of the present invention set forth in claim 12 includes a digital temperature controller that causes the heat pump to heat the gas when the temperature sensed by the temperature sensor is below the adjustable set point by a predetermined amount and causes the heat pump to cool the gas when the temperature sensed by the temperature sensor is above the adjustable set point by the predetermined amount. Support for the amendment to claim 12 can be found in paragraphs [0055]-[0056] of the present application.

Thus, all the claimed elements and features of claim 12, as amended, are not disclosed by the modified Gamow device. Applicants therefore respectfully submit that claim 12 is not obvious under 35 U.S.C. § 103(a) in view of the combination of Gamow, Lake and Smith. Claims 13-15 are dependent upon independent claim 12 and are therefore not obvious under 35 U.S.C. § 103(a) in view of the combination of Gamow, Lake and Smith for the same reasons mentioned with respect to claim 12 and because they each recite additional patentable elements and/or features. Accordingly, Applicants respectfully request that the rejection of independent claim 12 and dependent claims 13-15 under 35 U.S.C. § 103(a) be withdrawn.

Allowable Subject Matter

The Examiner has stated that claims 2-3, 10-11, 16-20 and 35-37 are allowed.

The Examiner has also indicated that claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have rewritten claims 4-5 in independent form including all of the limitations of previously presented independent claim 1. Accordingly, claims 4-5 are allowable and it is respectfully requested that the objection to claims 4-5 be withdrawn.

CONCLUSION

It is respectfully submitted that the present application, including claims 1-20 and 35-37, is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

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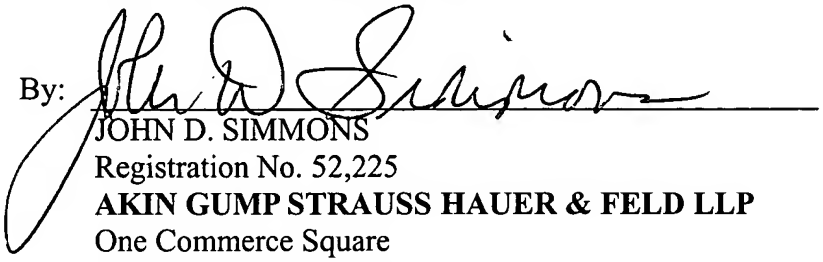
July 7, 2006 (Date) By: 

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